RETI Renewable Development Scenarios for CTPG Phase 3 Consideration

The RETI Stakeholder Steering Committee (SSC) submitted a renewable development scenario to the California Transmission Planning Group (CTPG) for assessment in its Phase 2 process. Draft results are now scheduled to be released on April 14. In addition, the RETI Transmission Working Group (TWG) has discussed two additional scenarios, described below, for consideration by the SSC for submittal to CTPG in its Phase 3.

Scenario 1 – Best CREZ with Commercial Core
After considerable discussion, the first renewable development scenario submitted by RETI to CTPG included a "commercial core" consisting of projects having power purchase agreements (PPAs) and which had applied for development permits, whether or not permits had been granted. These projects accounted for 16,216 GWh of energy from various areas and technologies. In this scenario, the remainder of the 52,764 GWh net short was assumed to be provided from in- and out-of-state CREZ at a ratio of 70/30.

California CREZ chosen included those with economic and environmental scores less than or equal to the respective median scores, i.e. those in the lower left quadrant of the bubble chart. These CREZ are:

Fairmont
Imperial North-A
Kramer
Round Mountain-A
San Diego South
Tehachapi

Energy in each of these CREZ for each technology was chosen proportional to the total potential energy not already included in the commercial core.

Out-of-state areas included in the scenario were those with economic scores less than or equal to the median score, since no environmental scores are available. These areas were:

Arizona
Idaho
Nevada
Oregon

Proposed Scenario 2 – Best CREZ without Commercial Core
In the SSC discussion of Scenario 1, strong differences of opinion were expressed as to whether the commercial core should be included or not. After considerable debate, the core was included in Scenario 1.

The proposed Scenario 2 for CTPG Phase 3 would omit the commercial core included in Scenario 1. 70% of the net short energy would be assumed to come from the California CREZ listed above and 30% from the out-of-state CREZ listed above (see note below regarding the Solano CREZ).

Proposed Scenario 3 – Cost Insensitive
The second proposed scenario discussed by the TWG would disregard California CREZ economic scores and generally assume that California renewable development occurs in CREZ having better than median environmental scores. The TWG appears to have reached consensus also to include a commercial core consisting of projects for which permits have been

issued, on the basis that such projects have already successfully passed environmental review. Energy from these core projects would contribute 9,698 GWh toward the net short, 3,798 of which is located outside California.

The TWG does not have a recommendation regarding whether to include energy from out-of-state areas in the scenario (other than energy in the core) and if so, how much and from which areas. If this scenario is to be forwarded to CTPG, the SSC must decide this issue.

Discussion

Option A) Energy, in addition to the core, divided 70/30 from lower cost OOS areas as in Scenarios 1 and 2.

Consistency with other RETI scenarios is likely to make comparison of the transmission results from CTPG assessment more transparent. Import transmission capacity may not be problematical, especially as out-of-state fossil generation is dispatched down as renewable generation is increased. However, the lack of environmental information for out-of-state areas makes these areas less comparable to California CREZ included in this scenario.

Option B) Omit out-of-state energy except for OOS projects in the core which have permits. Exclusion of OOS areas (except for 3,798 GWh which have been permitted) would create a scenario in which development is assumed to occur in areas which available data indicates have least environmental concern. Although almost these all of these areas would be in California, due to the lack of environmental information elsewhere, a case consisting almost entirely on in-state generation might provide a useful comparison with other RETI scenarios which rely fairly heavily on imported renewable energy.

Option C) Include OOS energy from the lower cost OOS areas at some percentage less than 30% but higher than 0%.

Other Considerations

Scenario Priorities

CTPG has informed RETI that it cannot ensure that time and resources will be available to consider two additional RETI scenarios in Phase 3. If the SSC forwards two scenarios to CTPG, it has been asked to identify which of the two has higher priority and should be chosen if only one assessment is possible.

Solano CREZ

The current environmental scoring methodology assigned a score to the Solano somewhat higher than the median score. On this basis, Solano was not included in Scenario 1. As a result of discussions between wind and environmental SSC members and further analysis of the scoring methodology as it affects Solano, a modification has been adopted which gives Solano a median environmental score.

Based on this result, Solano would be included in Scenario 3 described above. The question for the SSC is whether Solano should also be included in Scenario 2. Since it was not included in Scenario 1, including it now in Scenario 2 might make comparison of results more difficult. On the other hand, inclusion would be consistent with the proposed methodology for developing Scenario 2.